FAKULTÄT FÜR
WIRTSCHAFTSWISSENSCHAFT

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Introduction to Management (11048)
Summer Term 2013
Final Exam

You have 120 minutes time in which you can reach a maximum of 120 points.

There are a few pieces of advice we can offer at this stage:

1. Use the theoretical tools and terminology you have learned in class and from the textbook.
2. Make sure there is a clear structure in your argument. Use some time to sort your ideas before you start writing the version you want to submit.
3. Use the time you have! If you are ready much earlier than we planned, you should wonder if you forgot something.
4. Write legibly. The less we can read your handwriting, the fewer points you will receive.
5. Leave a margin for our comments.
6. You are welcome to use a non-programmable calculator.
7. Dictionaries and translators are not allowed.

Last Name, First Name: _____ **Student ID-number:** _____

Please solve all of the following four (4) problems.

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1. Concepts and Methods (30 points)

Briefly explain the following economic concepts and methods. Provide examples to illustrate your explanations.

a) Transaction cost *(5 points)*
b) Debt-to-equity ratio *(5 points)*
c) Price response function *(5 points)*
d) Externalities *(5 points)*
e) Chain-ratio-method *(5 points)*
f) Efficiency wages *(5 points)*

2. Incorporating your Business (30 points)

a) Compare a general partnership (OHG) to a limited liability company (GmbH) according to the following criteria (you may use a table). *(24 points)*

   i)   Minimum capital requirements
   ii) Number of founders/partners
   iii) Liability risk
   iv) Right of participation
   v)   Property rights
   vi) Foundation of the enterprise

b) Explain the terms personal liability, primary liability, and unlimited liability in partnerships. *(6 points)*

3. Production and Logistics (30 points)

a) Consider the following production function where Q is the production quantity, and F and W denote the two input factors used in the production process:

$$Q = \min\left\{ F , \frac{W}{2} \right\}.$$

Explain the term isoquant, and relate it to the above production function. Provide numerical and graphical examples to support your explanation. *(10 points)*

b) The Quintel Corporation operates in the semiconductor industry and produces silicon-based quantum chips. Below you find two tables containing the supplies, demands, and shipping costs of Quintel.

Plant	Production quantities (in 1,000s of units)	Warehouse	Warehouse demands (in 1,000s of units)
Magdeburg	200	Berlin	220
Dresden	340	Nuremberg	180
Hannover	140	Bonn	190
Hamburg	320	Stuttgart	410

Shipping Costs per 1,000 units in €					
		TO			
		Berlin	Nuremberg	Bonn	Stuttgart
FROM	Magdeburg	290	720	910	1,240
	Dresden	380	630	1,300	1,060
	Hannover	500	920	510	1,150
	Hamburg	460	1,320	900	1,410

What is the solution obtained using the Minimum Unit Cost Search method? Draw a transportation tableau with the respective transportation quantities, and calculate the total transportation costs! *(20 points)*

4. Staffing (30 points)

a) What does "Personnel Equipment" mean, and why does it constitute a problem area of collective personnel planning? Name and describe main influencing factors as well as possible means a company may use to manage this particular problem area. *(10 points)*

b) The owner of a restaurant has estimated how much staff he needs throughout the week. The restaurant is open seven days a week. The daily personnel requirement (PRp) occurs in a weekly rhythm which is shown below:

p	Mon	Tue	Wed	Thu	Fri	Sat	Sun
PR$_p$	13	15	9	10	17	9	12

Your task is to find a roster which covers the daily personnel requirements in compliance with the restriction that each employee works 5 consecutive days and has 2 days in a row off. Use the First Period Principle to solve this problem! *(20 points)*

p	Mon	Tue	Wed	Thu	Fri	Sat	Sun
PR$_p$							

p	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Arithmetic average							

p	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Cumulative sum							
Integer							

p	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Sum of the prev. day							
Difference							

Roster:

p	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Assigned employees							
PR$_p$							